

Machine Id  
**3721005**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 10W30 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0083974</b>	PC0074759	PC0066772
Sample Date		Client Info		<b>08 Mar 2024</b>	21 Apr 2023	11 Nov 2022
Machine Age	mls	Client Info		<b>374844</b>	283632	231102
Oil Age	mls	Client Info		<b>38000</b>	52000	58000
Filter Age	mls	Client Info		<b>38000</b>	52000	58000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>200	<b>35</b>	45	47
Chromium	ppm	ASTM D5185(m)	>6	<b>1</b>	2	2
Nickel	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>50	<b>14</b>	16	17
Lead	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>50	<b>5</b>	9	17
Tin	ppm	ASTM D5185(m)	>6	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	VLITE	---
Yellow Metal	scalar	Visual*	NONE	<b>VLITE</b>	NONE	---

**CONTAMINATION**

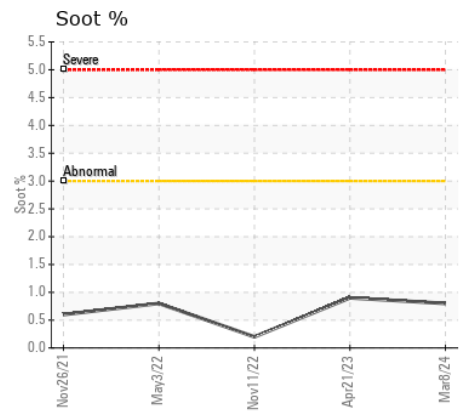
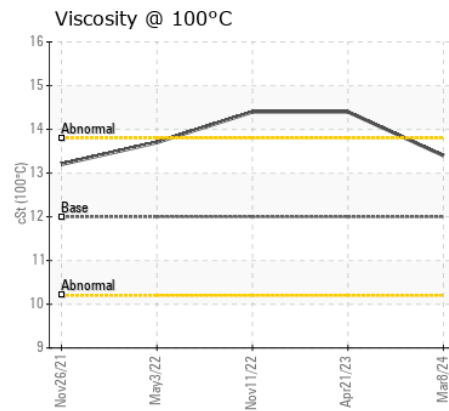
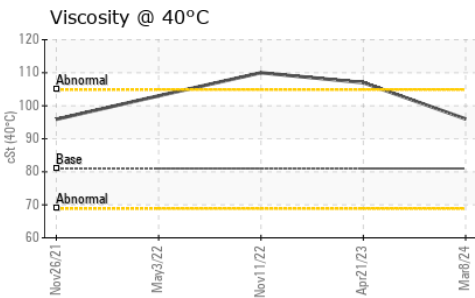
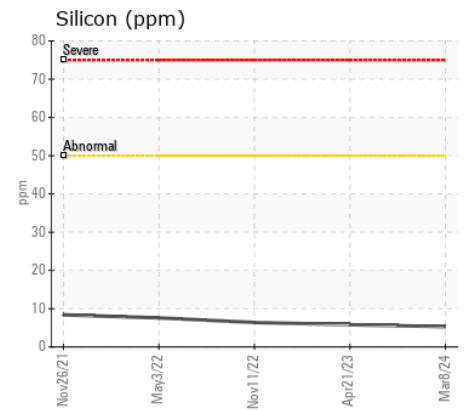
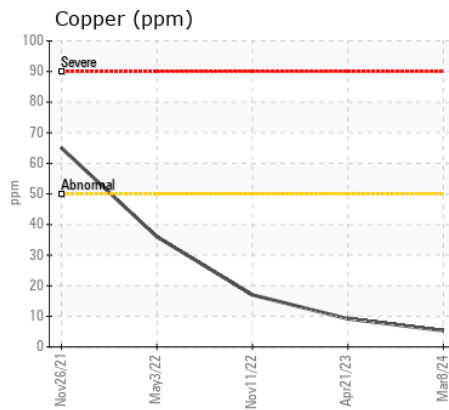
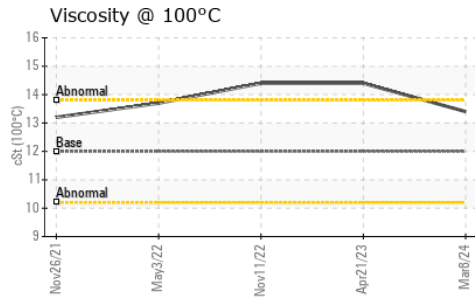
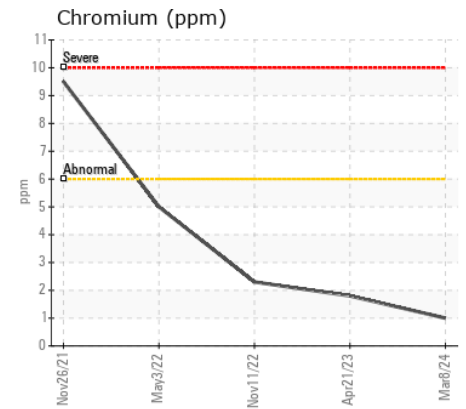
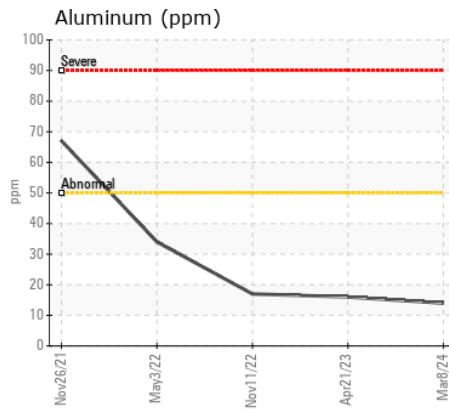
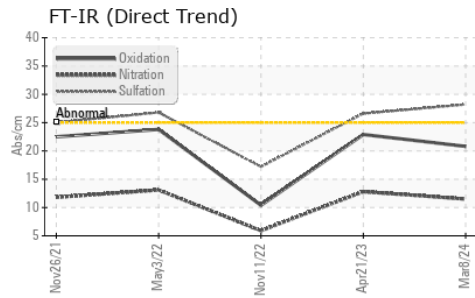
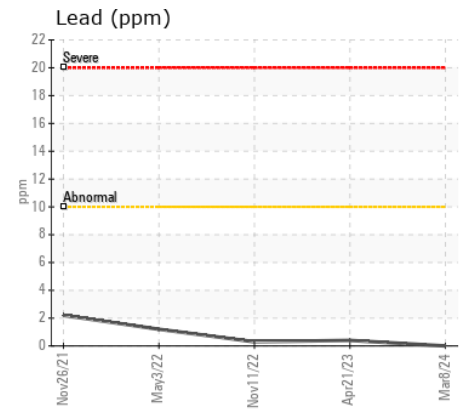
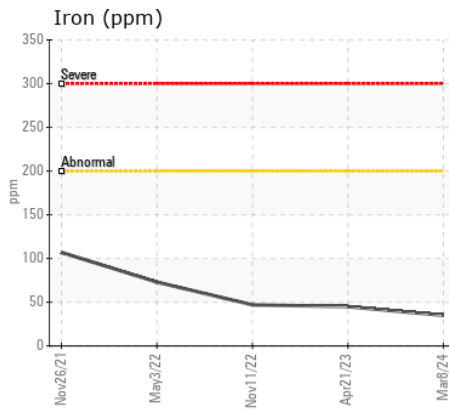
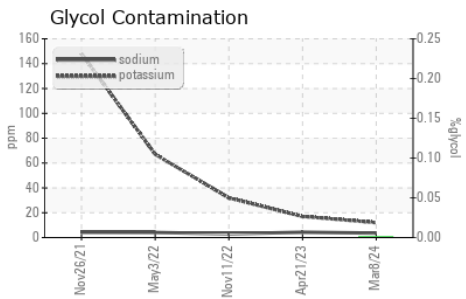
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>50	<b>5</b>	6	6
Potassium	ppm	ASTM D5185(m)	>20	<b>12</b>	17	32
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	ASTM D7922*		<b>0.0</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.8</b>	0.9	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>11.5</b>	12.8	5.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>28.2</b>	26.6	17.2
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>4</b>	4	3
Boron	ppm	ASTM D5185(m)		<b>11</b>	6	2
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>14</b>	60	65
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)		<b>113</b>	959	1067
Calcium	ppm	ASTM D5185(m)		<b>2304</b>	1240	1236
Phosphorus	ppm	ASTM D5185(m)		<b>916</b>	1099	1163
Zinc	ppm	ASTM D5185(m)		<b>1151</b>	1283	1338
Sulfur	ppm	ASTM D5185(m)		<b>2763</b>	2155	2094
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>20.8</b>	22.9	10.4
Visc @ 40°C	cSt	ASTM D7279(m)	81	<b>96.0</b>	107	110
Visc @ 100°C	cSt	ASTM D7279(m)	12.	<b>13.4</b>	14.4	14.4
Viscosity Index (VI)	Scale	ASTM D2270*	141	<b>139</b>	137	133



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0083974  
**Lab Number** : 02643080  
**Unique Number** : 5800619  
**Test Package** : MOB 1 ( Additional Tests: Glycol, KV40, VI, Visual )

**Received** : 20 Jun 2024  
**Tested** : 20 Jun 2024  
**Diagnosed** : 20 Jun 2024 - Wes Davis

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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